Claim 13, 24 and 26 have been prepared based on claim 1. The originally filed claim 1 recites a chitosan derivative containing at least **one** functional group selected from:

(I) a carbohydrate having a reducing terminal;

(II) a photo-reactive functional group;

(III) an amphipathic group; and

(IV) a glycosaminoglycan.

On the other hand, the chitosan derivative of claim 13 contains at least **two** functional groups selected from (I) to (IV) above.

In claim 24, (I) the carbohydrate having a reducing terminal and (II) the photo-reactive functional group are specifically limited in comparison with those of claim 1.

In Claim 26, although the chitosan derivatives per se are identical to those of claim 1, their uses are restricted. These uses are clearly supported by the specification (for example, see page 4, lines 8-10, and Examples 6-10).

Claims 14-23 and 25 correspond to claims 2-11 and 12, respectively.

(1) Claim Objections

(i) The Examiner has objected to the multiple dependent claims. However, the new claims 13-26 do not include a multiple dependent claim.

(ii) The Examiner has asserted that "(acetyl)glucosamin" should be changed to "(acetyl)glucosamine". In the new claims 13-26, "(acetyl)glucosamin" is corrected to "(acetyl)glucosamine".

It is believed that the claim objections should be withdrawn in view of the amendments to the claims as described above.

(2) The Examiner rejected Claims 1-4 under 35 U.S.C. 102(a) as being anticipated by JP-A-H10-182332 (Citation 1).

Citation 1 describes an amphipathic chitosan derivative represented by the formula:

(RCO-NH-X-NH)n-Y

(wherein R indicates an alkyl or alkenyl group having 2-22 carbon atoms, X indicates a saccharide, Y indicates a chitosan or partially deacetylated chitin, and n indicates an integer not less than 1).

However, the chitosan derivative of the present application has at least two functional groups (Claim 13). That is to say, the chitosan derivative of claim 13 of the present application has not only a carbohydrate but also at least one other functional group such as a photo-reactive group, amphipatic group, or glycosaminoglycane. In contrast, Citation 1 neither discloses nor suggests incorporation of such other functional group. Therefore, the chitosan derivative of claim 13 of the present application is clearly different from the derivative described in Citation 1.

On the other hand, the saccharide (X) of the chitosan derivative of Citation 1 must have N-acyl groups (RCO-NH-). However, the carbohydrate of the chitosan derivative of claim 24 of the present application is restricted to lactose, maltose, melibiose, cellobiose, laminaribiose, mannobiose or equivalents thereof which do not contain an N-acyl group. Therefore, the chitosan derivative of claim 24 of the present application is clearly different from those of Citation 1.

positively-charged molecule. As the positively charged molecule, (deacetylated) chitosan is described. The positively-charged molecule may contain a latent reactive group for covalently binding to the supporting surface.

However, similar to Citation 1, Citation 2 neither discloses nor suggests incorporation of another functional group such as carbohydrate. Therefore, the chitosan derivative of claim 13 of the present application is clearly different from the derivative described in Citation 2.

Citation 1 describes an azide group as a preferable latent reactive group (column 9). The azide groups include aryl azide such as sulfonyl azide. However, Citation 2 describes no specific example of a chitosan molecule having an azide group, and does not describe how to incorporate the azide group into a chitosan molecule. In contrast, the photo reactive group of claim 24 of the present application is restricted to (A)-(D). Citation 2 does not describe these specific structures (A)-(D). Therefore, the chitosan derivative of claim 24 of the present application is clearly different from those of Citation 2.

Accordingly, since the chitosan derivatives recited in claims 13 and 24 are different from Citations 1 and 2, claims 13 to 25 are novel and inventive over Citations 1 and 2.

(4) The chitosan derivatives of Citation 1 are used as external agents for the skin in the form of a lotion, cream, ointment, shampoo or foundation based on their antibacterial or moisturizing properties. However, Citation 1 neither discloses nor suggests the use of the chitosan derivatives for wound dressings, anti-adhesion materials, hemostatics, sealants for body fluids or gases, clathrates for drug delivery or encapsulating agents for cells adhesive.

The positively-charged molecule such as chitosan is used as a coating material for a cell culture support. However, Citation 2 also does not describe the use of chitosan [illegible]

In contrast, although the chitosan derivatives per se are identical to those of claim 1, their uses are restricted to those not described in Citations 1 and 2.

In conclusion, new claims 13 to 26 are novel and patentable over Citations 1 and 2.

In view of the foregoing, applicant now believes that claims 13-26 are patentable and that the application as now amended is in condition for allowance, and notice to such effect is respectfully requested.

If any fees are required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 33550.

Respectfully submitted,
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